Underground Safety Board Seeks Public Comment on Draft Standard Safety Practices for Potholing

Public Comment Period
July 28, 2025, through September 9, 2025

The Underground Safety Board (Board) is seeking public input on its draft Standard Safety Practices for Potholing from July 28, 2025, to September 9, 2025 (see Attachment A below). The Board welcomes the input of excavators, operators, locators, construction firms, and other interested stakeholders to collect feedback. The Board will consider comments related to the proposed standards before approving them.

These draft Standard Safety Practices for potholing address excavating around subsurface installations. These Standard Safety Practices are not intended to replace other relevant standards, including the Best Practices of the Common Ground Alliance, but are to inform areas currently without established standards.

WRITTEN COMMENT PERIOD
Any interested person, or their authorized representative, may submit written comments on the draft Standard Safety Practices. The comment period begins on July 28, 2025, and ends on September 9, 2025. Comments must be received **by 5 p.m. on September 9, 2025.**

- E-filing: Docket #2025-07-PC, or

- Email: digboard@energysafety.ca.gov (include in the subject line of the email "Standard Practices for Potholing Public Comments"), or

- Mail to:
  Office of Energy Infrastructure Safety
  Attn: Jaime Hastings, Underground Infrastructure Directorate
  715 P Street, 15th Floor
  Sacramento, California 95814

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Attachment A
Proposed Potholing Standards and Descriptions

1. Identification of Potholing Locations

The excavator determines where potholes are necessary to uncover the exact location of existing underground facilities within the project area. The excavator consults information from multiple sources for existing facility locations (as available) before potholing, including:

- design plans,
- field locate marks,
- visual surveys of surface indicator,
- maps from utility operators,
- input from locators and operators' staff.

To determine direct points of conflict, the excavator identifies and potholes, at a minimum, at the following locations:

- Proposed crossings. The excavator identifies and potholes where the proposed excavation and existing buried facilities will overlap. The excavator does not pothole in softscape outside the path of excavation to avoid having to pothole concrete or asphalt in the path of excavation.
- Existing crossings. The excavator identifies and potholes existing buried facility crossings to maintain appropriate facility clearances, noting that depths often change at crossings. Information gathered through potholing at crossings supplements, but does not replace, information gathered from potholing other portions of the facility.
- Selected Joints. The excavator identifies and potholes at tees, changes in facility diameter, and any other locations where buried structures, features, or fittings are likely to protrude in the direction of excavation. This also includes any change in the facility's direction.
- Parallel and stacked facilities. When trenching or boring to install a new buried utility parallel to an existing one or road milling or grading over existing lines, the excavator identifies where to pothole and how many potholes to make to preserve horizontal and vertical clearances (separations).
- Change in direction. The excavator potholes to identify when buried facilities deviate from a straight path.
- Expected cover. The excavator should consider whether the depth of cover has changed due to loss of ground cover, soil type, or land use and perform additional potholes to verify depth of facilities.

Discussion: When determining pothole locations, excavators use multiple sources of information that may be present at the project area after the locate-and-mark process, including field locate marks and surface indicators. Other sources, such as maps, design plans, and recommendations from locators and operators' staff require participation from

external entities beyond the standard locate process. Crossings of any kind—both proposed and existing—are opportunities for encountering facilities at unpredictable depths and should be potholed. Junctions, fittings, and other joints are often bulkier than the rest of a line and may also indicate the presence of unlocatable or abandoned stubs nearby. Parallel facilities present a continuous risk: maintaining horizontal and vertical clearances, investigating changes of direction, facility materials, facility conditions or vintage, and the soil conditions surrounding each utility may all be causes for additional potholes. When a change in direction is identified it should be verified in multiple locations. When a change of cover is identified it should be verified in multiple locations as the change in cover may vary along the length of the project. Meetings about high-priority facilities within ten feet of the excavation per 4216.2(c) and other pre-construction meetings may result in recommended potholing of some facilities at regular intervals to ensure adequate clearances. Contractual agreements regarding facility exposure may specify mandatory potholing of some facilities.

2. Confirmation of Marks Using Utility Operator Responses and Surface Indicators

The excavator uses the information provided by utility operators and reviews the site for surface indicators to confirm that all utility operators have identified their buried facilities.

Excavators document markings and potentially unmarked surface indicators. If the excavator identifies a discrepancy among utility responses, marks, and surface indicators that could lead to the damage of a buried facility, the excavator contacts the utility operator to resolve the discrepancy.

If a mark by a utility operator does not include the number of buried facilities in a bank of conduit or ducts, the width of buried facilities, or the size or material of the buried facility, the excavator contacts the utility operator for clarification.

Discussion: Surface indicators, such as junction boxes, hand holes, transformers, and streetlights indicate the presence of buried infrastructure. Related requirements, best practices, and guidelines include:

- Government Code sections 4216 (n) and 4216.3 (a) & (e).
- California Public Utilities Commission General Order 128[1] (Construction of Underground Electric Supply and Communications Systems), Rules 17.8 (Identification of Manholes, Handholes, Subsurface and Self-contained Surface-mounted Equipment Enclosures) and 35.1 (Identification of Cables)
- CGA *Best Practices*[2] 5.10 (Locate Verification), 5.11 (Documentation of Marks), 5.12 (Work Site Review with Company Personnel), 5.21 (Mismarked Facilities), Appendix B (Guidelines for Operator Facility Field Delineation)[3]
- American Water Works Association California/Nevada Section *Guidelines for Distribution of Nonpotable Water*[4] (1992) Sections 2.5 (Valve Box and Other Surface Identification) and 4.1 (Marking).

3. Pothole Frequency, Intervals, and Depth

The excavator always evaluates and determines the frequency and intervals of potholes using the most current information available including the appearance of new locate marks or surface indicators that became apparent after the completion of design plans, and any other identifying factors. The excavator ensures that the depth of potholes is no less than the depth of the planned excavation plus a 12-inch margin to verify whether facilities are present beneath the excavation zone. The excavator may need to physically support exposed facilities to prevent movement as specified in CGA Best Practice 5.22[5].

Discussion: The excavator always gathers all available information from design plans, maps, mark-and-locate marks, landmarks, observations from site walks and any other indication that a subsurface facility might be present within the excavation zone. The frequency, intervals, and depth of potholes will provide the excavator visual verification of known facilities, unmarked facilities, and any other obstacle.

4. Deeply Buried Facilities – Exceptions to Positive Confirmation Based on Data Quality C Information

When the utility operator has identified a facility significantly deeper than the excavation, designers and/or excavators can use a combination of Quality Level C and Quality Level D information in lieu of exposure.

Discussion: Deeply buried facilities lie at a significant depth below the ground surface. Deeply buried facilities typically include large-diameter pipes, tunnels, and other infrastructure but may include other types of facilities, such as communications conduits, installed through horizontal directional drilling. Utility operators communicate the presence of deeply buried facilities as part of the information provided to designers and excavators. Quality levels are defined in ASCE 38-22, where:

- Quality Level D refers to record research,
- Quality Level C includes a review of surface indicators and comparison to records,
- Quality Level B uses surface electronic locating or other geophysical methods, and
- Quality Level A generally requires exposure of a buried facility to determine its location.

5. Actions When Potholing Cannot be Performed

The excavator meets with the operator and any other relevant representatives (such as, but not limited to, representative of a local city, county or state office with jurisdiction over the area to be excavated) when potholing is to be performed and the parties agree on a strategy to identify and protect subsurface facilities that may be present prior to proceeding with mechanical excavation. The operator ensures that an agreement is reached with all relevant parties prior to proceeding with excavation.

Discussion. The CGA Best Practices address situations when trenchless excavation will be used and facilities are known to be present but cannot be potholed. This standard expands to excavation methods other than trenchless excavation (such as open trench excavation when facilities are embedded in concrete or well drilling) and ensures that the operator reaches agreement with all relevant parties prior to the excavator proceeding with excavation.

6. **Documenting Utility Operator Marks and Potholes, and Communicating the Results of Potholing**

   The excavator records utility operator field marks, including through photographs. The photographs of field marks include reference information where feasible, especially of surface indicators. The excavator records buried facility location information in pothole maps or logs, including depth and any appurtenances that could interfere with the excavation or clearances of the new construction. The excavator adds a locating device, such as a marker ball or other tag when unmarked facilities are identified in all potholes that contain unmarked facilities.

   The excavator conveys the results of potholing, and all facilities identified, to all work crews, contractors, and subcontractors working in or near the excavation zone.

   Discussion: Effective documentation allows project participants to understand when a problem is identified later and what the source(s) of that problem may have been. Adding a locating device to previously unidentified facilities will assist in locating facilities after potholes are filled.

7. **Identification and Protection of Sewer Laterals**

   The excavator examines nearby structures, such as homes and businesses, and surface markings, such as sewer manholes, to determine whether sewer laterals may be in the area of excavation. If sewer laterals are determined exist, the excavator will look for surface indicators indicating the location of sewer laterals, including cleanouts. Sewer laterals will be protected in the same manner as other buried facilities, unless the excavator comes to an agreement with the owner of the sewer lateral. Any such agreement should be in writing and affirmed by both parties.

   Discussion: Government Code section 4216 exempts owners of storm drains and sewer laterals from needing to mark them. Most sewer laterals in California are owned by the property owner, rather than the sanitary district. Therefore, it may be difficult for an excavator to collect information records regarding sewer laterals. As the sewer lateral is usually property of the property owner rather than the sewer agency, the excavator must protect the sewer lateral in the absence of any agreement with the property owner.

8. Operator Responds to Excavator Request for Additional Information About the Location of a Subsurface Installation

An excavator contacts the operator when an excavator needs assistance determining the exact location of subsurface installation. This information may include the depth of the facility, if known.

Discussion: Gov. Code Section 4216.4(b) requires that an excavator request additional information from operators if the excavator cannot locate a subsurface installation using hand excavation, or by using approved exceptions to hand tools per 19 CCR section 4501. In addition, Gov. Code section 4216.4(b) requires an operator to provide relevant existing additional information to the excavator within one working day. If the excavator has questions about the markings that an operator has placed, the excavator may contact the notification center to request the operator contact the excavator directly. The regional notification center is required to provide the excavator with the contact telephone number of the subsurface installation operator. The information provided by operators to excavators in these situations may include depth. Depth information provided to the excavator about a subsurface installation is not a substitute for the excavator exercising reasonable care during excavation.

[1] GO 128 - Rules For Construction of Underground Electric Supply and Communication Systems
[2] Common Ground Alliance *Best Practices* Home
[3] Guidelines for Operator Facility Field Delineation
[4] Guidelines_for_the_Distribution_of_Nonpotable_Water.pdf
[5] 5.22 Exposed Facility Protection